ATS-16-554

OCD Hobbs

Form 3160-3
(June 2015)

HOBBS OCD
JUN 17 2016
RECEIVED

FORM APPROVED
OMB No. 1004-0137
Expires January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
SHL\BHL: NMNM0392082A

6. If Indian, Allotee or Tribe Name

1a. Type of Work: [X] DRILL [ ] REENTER

1b. Type of Well: [ ] Oil Well [X] Gas Well [ ] Other

1c. Type of Completion: [X] Hydraulic Fracturing [X] Single Zone [ ] Multiple Zone

UNORTHODOX LOCATION

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No. (316338)
Hallertau 5 Federal #10H

2. Name of Operator
Cimarex Energy Co. (215099)

9. API Well No.
30-025-43304

3a. Address
202 S. Cheyenne Ave., Ste 1000, Tulsa, OK 74103

3b. Phone No. *(include area code)*
918-585-1100

10. Field and Pool, or Exploratory (98065)
WC-025 G-08 S263205N-UPPER WC

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At Surface: 318 FSL & 1782 FWL

At proposed prod. Zone: 330 FNL & 1635 FWL *Wolfcamp*

11. Sec., T. R. M. or Blk. and Survey or Area
5, 26S, 32E

14. Distance in miles and direction from nearest town or post office*
Jal, New Mexico is +/- 29.9 miles easterly

12. County or Parish: Lea

13. State: NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
318	NMNM0392082A=1400.49 acres	160.00

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
20' to the # 9 well	Pilot Hole TD: N/A 16,412 MD 11,910 TVD	NMB001187; NMB001188

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
3273 GR	3/14/16	30 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

1. Well plat certified by a registered surveyor
2. A Drilling Plan
3. A Surface Use Plan (if the location is on National Forest System Lands , the SUPO shall be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator Certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature	Name *(Printed/Typed)*	Date
Aricka Easterling	Aricka Easterling	1/13/16

Title: Regulatory Compliance

Approved By *(Signature)*	Name *(Printed/Typed)*	Date
James A. Amos	Office CARLSBAD FIELD OFFICE	JUN 14 2016

Title: FIELD MANAG

Application approval does not warrant or certify that the
conduct operations thereon.
Conditions of approval, if any, are attached.

se which would entitle the applicant to

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Sectic
States any false, fictitious or fraudulent statements or re

e to any department or agency of the United

See attached NMOCD
Conditions of Approval

Carlsbad Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

06/17/16

Approval Subject to General Requirements
& Special Stipulations Attached

(Continued on page 2)

*(Instructions on page 2)

1. Geological Formations

TVD of target 11,910
MD at TD 16,412

Pilot Hole TD N/A
Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
Quaternary Fill	0	N/A	
OSE Groundwater	250	N/A	
Rustler	1025	N/A	
Salt	1350	N/A	
Castille	2700	N/A	
Base Last Salt	4220	N/A	
Lamar	4435	N/A	
Delaware Group	4475	Hydrocarbons	
Bone Spring	8520	Hydrocarbons	
Wolfcamp	11720	Hydrocarbons	
Wolfcamp X ss	11755	Hydrocarbons	
Wolfcamp Y ss	11870	Hydrocarbons	
Wolfcamp A-1 Shale	11895	Hydrocarbons	

2. Casing Program

Hole Size	Casing Depth From	Casing Depth To	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	~~975~~ 1210	13-3/8"	48.00	H-40/J-55 Hybrid	ST&C	1.66	3.88	6.88
12 1/4	0	4355	9-5/8"	40.00	J-55	BT&C	1.22	1.71	3.62
8 3/4	0	11308	7"	32.00	L-80	LT&C	1.59	1.67	1.76
8 3/4	11308	12209	7"	32.00	L-80	BT&C	1.51	1.48	38.67
6	11308	16412	4-1/2"	13.50	P-110	BT&C	1.44	1.67	51.93
					BLM Minimum Safety Factor		1.125	1	1.6 Dry 1.8 Wet

See COA

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	N
Is well within the designated 4 string boundary.	N
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	N
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	N
Is 2nd string set 100' to 600' below the base of salt?	N
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	N
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	N
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	N

3. Cementing Program – See COA- (not adequate cement)

Casing	# Sks	Wt. lb/gal	Yld ft3/sack	H2O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surface	409	13.50	1.72	9.15	15.5	Lead: Class C + Bentonite
	195	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate	823	12.90	1.88	9.65	12	Lead: 35:65 (Poz:C) + Salt + Bentonite
	254	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Production	570	10.80	2.35	9.60	17:43	Lead: Tuned Light I Class H
	115	14.20	1.30	5.86	14:30	Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + SMS
Completion System	313	14.20	1.30	5.86	14:30	Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + SMS

Casing String	TOC	% Excess
Surface	0	42
Intermediate	0	44
Production	4155	23
Completion System	12109	10

4. Pressure Control Equipment — See COA

	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.

BOP installed and tested before drilling which hole?	Size	Min Required WP	Type		Tested To
12 1/4	13 5/8	2M	Annular	X	50% of working pressure
			Blind Ram	X	2M
			Pipe Ram		
			Double Ram	X	
			Other		
8 3/4	13 5/8	10M	Annular	X	50% of working pressure
			Blind Ram	X	10M
			Pipe Ram		
			Double Ram	X	
			Other		
6	13 5/8	10M	Annular	X	50% of working pressure
			Blind Ram	X	10M
			Pipe Ram		
			Double Ram	X	
			Other		

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

X	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.	
X	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.	
	N	Are anchors required by manufacturer?

See COA

5. Mud Program

See COA

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0' to 975' 1210'	FW Spud Mud	8.30 - 8.80	28	N/C
975' to 4355' 1210'	Brine Water	9.70 - 10.20	30-32	N/C
4355' to 12209'	FW/Cut Brine	8.70 - 9.20	30-32	N/C
12209' to 16412'	Oil Based Mud	11.50 - 12.00	50-70	N/C

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring

6. Logging and Testing Procedures

Logging, Coring and Testing	
X	Will run GR/CNL fromTD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
	No logs are planned based on well control or offset log information.
	Drill stem test?
	Coring?

Additional Logs Planned	Interval

7. Drilling Conditions — Possibility of abnormal pressure - See COA

Condition	
BH Pressure at deepest TVD	5697 psi
Abnormal Temperature	No

See COA

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
X	H2S is present
X	H2S plan is attached

8. Other Facets of Operation